

# Dr Frank Burton

## Curriculum Vitae

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## Motivation

I'm currently looking for highly challenging software engineering work and have experience in solving highly difficult problems that can be seen from both my work at Solarflare Communications and my doctorate degree. I'm both self motivated and driven to succeed.

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## Employment History

May 2017-  
Mar 2015 **Software Engineer**, *Solarflare Communications*, I worked in the high performance (40 GBit/s) network traffic capture team, writing high performance C code for capturing network traffic to disk and performing analysis on the captured network traffic and also writing Python to implement business logic.

Amongst other things, I wrote the code to turn the FPGA output into meaningful packet data, wrote the code for the Virtual Filesystem (FUSE) to allow the end user to access the stored network traffic and introduced the use of a REST server for interacting with the UI team's code.

I was the team liaison to both the FPGA software team and the front-end UI team, which worked at geographically distinct sites. I worked with the following technologies: C, Docker, Flask, FUSE, Mercurial, PostgreSQL, Python, Scrum, SQLAlchemy and Unit Testing on the project.

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## Education

2009–2014 **Doctor of Engineering in Large Scale Complex IT Systems**, *The University of York*, The Doctor of Engineering programme encompasses a traditional Computer Science PhD along with a one-year taught master course on Large Scale Complex IT Systems. The research project is furthermore set by an industrial sponsor (MooD International) and focuses on solving a real world problem from industry.

2006-2009 **Bachelor of Engineering in Computer Science**, *The University of York*, **First Class with Honours.**

2004–2006 **A Levels at Stoke on Trent Sixth Form College.**

Mathematics	A	Computing	A
Further Mathematics	B	Physics	A

1999–2004 **GCSEs at Clayton High School, 5A's, 3B's & 2.5C's.**

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## Doctor of Engineering Thesis

Title *Trade-offs in System of Systems Acquisition*

Supervisors Richard Paige, Simon Poulding, Dick Whittington & Simon Smith

Description Large organisations tend to have multiple organisational goals. To satisfy these goals, organisations acquire different resources such as new systems, training programmes, infrastructure and processes. These different resources combined together to meet the same organisational goals can be considered as a *System of Systems*. The thesis focuses on providing a novel technique with prototype tool support to explore the different possible resource combinations in satisfying organisational goals to perform more efficient acquisitions.

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## Programming Projects

GB Emulator I have developed an open source classic Gameboy emulator called FireGB using C++.

CATMOS The prototype tool for my thesis is written using a combination of Java, Epsilon, C++, Prolog and Lua.

Ludum Dare Team Entry Working as part of a team in the University of York HackSoc society, I helped develop a simple platformer game within a 72-hour time period using Lua with Love2D.

Flying game As an extension of one of my undergrad coursework project I developed a simple 3d flying game written in C++.

The Yorker I took part in the construction of The Yorker, an online student newspaper, as part of a programming team of roughly 15 students.

These can be downloaded from <http://www.frankroystonburton.co.uk>

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## Interests

Live Action Role-play I'm involved in live action role-play in my spare time, live action role-playing, can be seen simply as taking role-playing games from the pen and paper systems and bringing them to the physical world.

Anime I go to national Anime conventions and occasionally Anime marathon sessions.

Programming Starting with learning QBasic from a library book at the age of 8. Over the years I have become familiar with many languages including C, C++, Java, Python, Lua, Scheme, VB, PHP, MySQL, Epsilon, Xtext & Prolog amongst others.

Computer Games I'm a fan of modern RTS games such as Planetary Annihilation and StarCraft 2 and occasionally play games such as Overwatch and Zelda: BOTW.

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## References

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